

**Abstract of the Disclosure**

A cellulose fiber having extended biostability and the method of its manufacture are described. While prior treatments of cellulose with biotoxic metal compounds have given improved resistance to decay, these treatments have not been entirely satisfactory where the fiber had to be refined before use. Refining energy was very high and fiber length loss was substantial. Treatment of cellulose fiber with didecyldimethylammonium chloride (DDAC) or bromide (DDAB), these materials in combination with low levels of copper, or low levels of copper alone, has given a product with very good biostability without a major increase in refining energy or loss of fiber length. The treated fiber is particularly advantageous as a reinforcing component for cement board products.